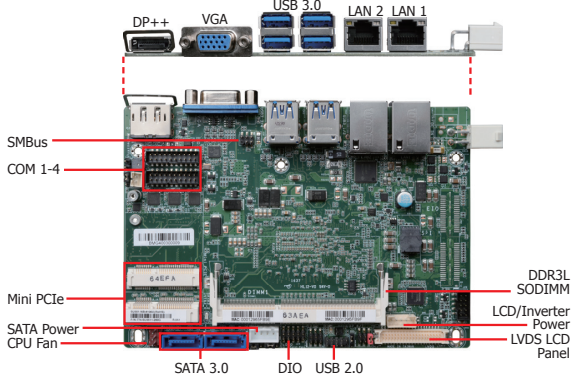


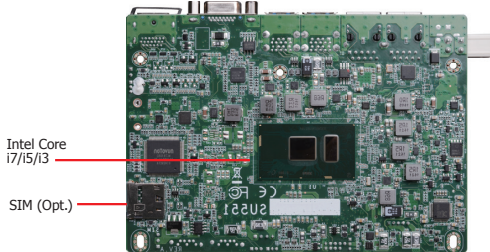
## 3,5" Board

### Features

- 1 DDR3L SODIMM up to 8GB
- Three independent displays: VGA + LVDS + DP++
- DP++ resolution up to 4096x2304 @ 60Hz
- Wireless communication: Mini PCIe
- Rich I/O: 2 Intel GbE, 4 COM, 4 USB 3.0, 2 USB 2.0



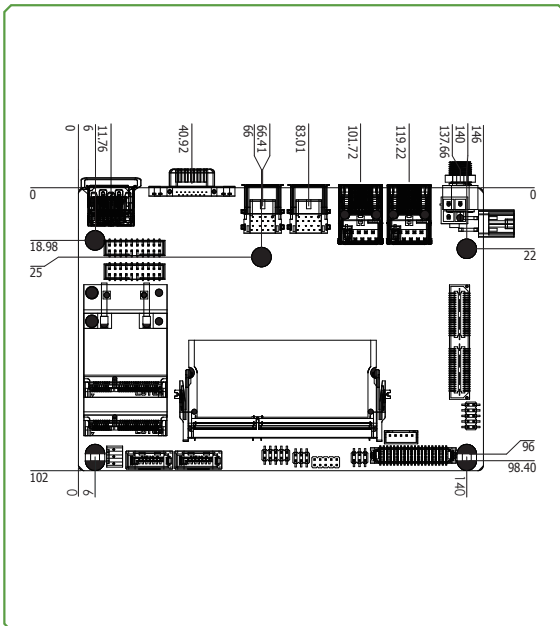
Top View



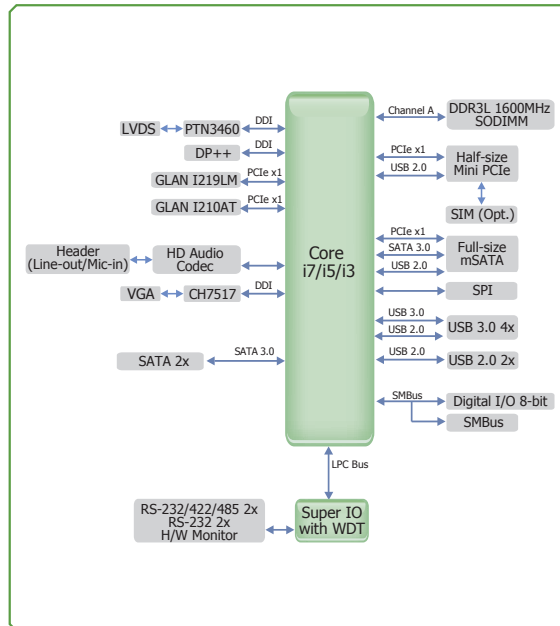
Bottom View



### Mechanical Drawing



### Block Diagram



### Specifications

<b>SYSTEM</b>	<b>Processor</b>	6th Generation Intel® Core™ Processors, BGA 1356 Intel® Core™ i7-6600U Processor, Dual Core, 4M Cache, 2.6GHz (3.4GHz), 15W Intel® Core™ i5-6300U Processor, Dual Core, 3M Cache, 2.4GHz (3.0GHz), 15W Intel® Core™ i3-6100U Processor, Dual Core, 3M Cache, 2.3GHz, 15W Intel® Celeron® Processor 3955U, Dual Core, 2M Cache, 2.0GHz, 15W	
	<b>Memory</b>	One 204-pin SODIMM up to 8GB	Single Channel DDR3L 1600MHz
	<b>BIOS</b>	Insyde SPI 128Mbit	
<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Graphics GT Series	
	<b>Feature</b>	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9	
	<b>Display</b>	1 x VGA 1 x LVDS 1 x DP++	VGA: resolution up to 1920x1200 @ 60Hz LVDS: dual channel 48-bit, resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2304 @ 60Hz
<b>EXPANSION</b>	<b>Triple Displays</b>	VGA + LVDS + DP++	
	<b>Interface</b>	1 x Full-size Mini PCIe (PCIe/USB/SATA, SATA by default) 1 x Half-size Mini PCIe (PCIe/USB, PCIe by default) 1 x SIM (supported by half-size Mini PCIe) (available upon request)	
<b>AUDIO</b>	<b>Audio Codec</b>	Realtek ALC888S-VD2-GR	
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I210AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT1.0 (10/100/1000Mbps) (only Core i7/i5 supports iAMT)	
<b>REAR I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)	
	<b>USB</b>	4 x USB 3.0	
	<b>Display</b>	1 x VGA 1 x DP++	
<b>INTERNAL I/O</b>	<b>Serial</b>	2 x RS-232/422/485 (2.0mm pitch) 2 x RS-232 (2.0mm pitch)	
	<b>USB</b>	2 x USB 2.0 (2.0mm pitch)	
	<b>Display</b>	1 x LVDS LCD Panel Connector	1 x LCD/Inverter Power
	<b>Audio</b>	1 x Audio (Line-out/Mic-in)	
	<b>SATA</b>	2 x SATA 3.0 (up to 6Gb/s)	1 x SATA Power
	<b>DIO</b>	1 x 8-bit DIO	
	<b>SMBus</b>	1 x SMBus	
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>POWER</b>	<b>Type</b>	Single 12V +/-10% DC	
	<b>Connector</b>	Right Angle Connector (4-pin)	DC Jack (available upon request) Vertical Type Connector (4-pin) (available upon request)
	<b>Consumption</b>	Typical: 6300U:12V @ 0.40A (4.80Watt) Max.: 6300U:12V @ 2.08A (24.96Watt)	
	<b>RTC Battery</b>	CR2032 Coin Cell	
<b>OS SUPPORT</b>	<b>Microsoft</b>	Windows 7 (/WES7) 32/64-bit Windows 8.1 (64-bit) Windows 10 IoT Enterprise 64-bit	
	<b>Linux</b>	Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Ubuntu 15.10 (Intel graphic driver available)	
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C (Opt. -20 to 70°C)	Storage: -40 to 85°C
	<b>Humidity</b>	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	<b>MTBF</b>	SU551 : 430,978 hrs @ 25°C; 253,129 hrs @ 45°C ; 157,798 hrs @ 60°C	
<b>MECHANICAL</b>	<b>Dimensions</b>	3.5" SBC Form Factor	146mm (5.75") x 102mm (4.02")
	<b>Height</b>	PCB: 1.6mm	Top Side: 15.5mm, Bottom Side: 4.0mm
<b>CERTIFICATIONS</b>	CE, FCC, RoHS		

### Ordering Information

Model Name	P/N	Processor	Memory	GbE	RS-232/422/485	RS-232	USB 3.0	USB 2.0	Power	Thermal	Temp.
SU551-NB-6300U	770-SU5511-000G	i5-6300U	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C
SU551-NB-3955U	770-SU5511-100G	3955U	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C
SU551-NB-6100U	770-SU5511-200G	i3-6100U	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C
SU551-NB-6600U	770-SU5511-300G	i7-6600U	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C
SU551-NE-6600U	770-SU5511-400G	i7-6600U	1 SODIMM	2	2	2	4	2	12V DC	Fanless	-20 to 70°C

Note: -20~70 degree models are supported upon request with MOQ requirement.

### Packing List

• 1 SU551 board	
• 1 COM port cable (Length: 300mm, 2 x COM ports)	A81-015020-001G
• 1 Serial ATA data cable (Length: 500mm)	332-553001-005G
• 1 Serial ATA power cable (Length: 250mm)	A81-004041-016G
• 1 DVD	
• 1 Heat sink (Height: 20.85mm)	A71-011061-000G

### Optional Items

• USB port cable (Length: 200mm)	A81-001032-016G
• Power adapter (60W, 12V)	671-106012-000G
• Heat spreader (Height: 11mm)	A71-011078-000G
• 1 Audio cable (Length: 160mm)	A81-022007-016G